AA. Elytra with the seventh interval alone carinate, and it very prominently so, the carina crenulate on top; elytra strongly sericeous laterad to the seventh interval; pronotum without median impression, the lateral carinae vague and confined to the basal half; antennae seven-segmented; length $3-3.5 \mathrm{~mm} . ;$ Quebec (Chagnon), Connecticut (Britton), and District of Columbia (Ulke) to Michigan (Hatch) and Iowa (Wickhamt). . ...................................glabratus Say The figures were drawn by Miss Dorotha Pemberton, a student at the University of Washington employed by the National Youth Administration with funds appropriated by the United States Government.

## Four New Coleoptera (Elateridae and Buprestidae).

By Josef N. Knull,

The Ohio State University, Columbus, Ohio.
Conoderus browni n. sp.
o - Form robust, rufocastaneous on both surfaces with a somewhat indistinct irregular dark transverse area at base and another on apical third of elytra, apical one extending along suture.

Head convex ; front broadly rounded; surface densely punctured; punctures separated by less than their own diameters; antennae extending one joint beyond hind angles of pronotum, scape stout, second joint slightly longer than wide, third joint longer than second, fourth joint longer than second and third taken together, fifth joint shorter than fourth, joints five to eleven of about equal length, joints four to ten slightly serrate.

Pronotum longer than wide, wider at base than in front, widest back of middle, hind angles produced, acute ; disk convex, prehumeral carinae single, sinuate, divergent from lateral margin; surface densely punctured with one type of puncture which becomes smaller at base and sides. Scutellum round, finely punctured.

Elytra a little over two times as long as wide, gradually narrowing posteriorly to rounded apices; disk with strongly impressed striae, punctures small and confluent, interspaces convex, very finely puctured.

Beneath finely densely punctured. Fourth tarsal segment broadly lamellate beneath.

Length 7.6 mm .; width 2.1 mm .
Described from a series of specimens collected at Brownsville, Texas, from May 10 to June 6, 1935 by the author.

Holotype male, May 22, and paratypes in writer's collection, paratypes in Canadian National Collection, U. S. National Museum and Ohio State University Collection.

According to Van Dyke's key ${ }^{1}$ this species would run to $C$. varians Seinh., but can be distinguished by the coarser punctures of the pronotum and the smaller size.

Variation. The indistinct dark color pattern unites the two dark areas of the elytra by extending the entire length of the suture in some specimens. Other specimens show signs of a similar median area on pronotum.

I take pleasure in naming this species after Mr. W. J. Brown who has done extensive work with the Elateridae.

## Limonius flavomarginatus n . sp.

ô. Resembling a small specimen of L. griseus Beauv. in size, form, color and general appearance. Above dark brown, head, pronotum and elytra with exception of sutures margined with dark yellow, beneath in most part dark brown margined with dark yellow, legs same color as the margins; clothed with moderately long fulvous pubescence.

Head with front slightly concave near front margin; front margin broadly rounded, no indication of an emargination; surface densely punctured, punctures separated by less than their own diameters; eyes small, finely granulate; antemnae reaching to just beyond hind angles of pronotum when laid along side margin, second and third joints short, of equal length, joints four to ten longer, serrate, eleventh joint elongate.

Pronotum slightly longer than wide, narrower in front than at base, widest back of middle ; sides broadly rounded anteriorly, sinuate near base ; disk convex, slightly depressed in front of scutellum, prehumeral carinae single, distinct; surface densely punctate, punctures separated by a distance less than their own diameters. Scutellum round, granulate.
Elytra less than three times as long as wide, gradually narrowed posteriorly to rounded apices ; disk with striae impressed, punctures large, separated by about their own diameter, interspaces finely punctured, not rugose.

Beneath finely densely punctured; propleurae with punctures contiguous : prosternal sutures distinctly sulcate in front.

Length 9.7 mm .; width 2.5 mm .

[^0]9. Differs from the male by antennae not reaching hind angles of pronotum; length 11.1 mm .

Holotype malc and allotype collected at Rock Bridge, Ohio, June 14. 1936, by the writer, in the collection of the author.

According to \an Dyke's key ${ }^{1}$ this species would run to $L$. plebcjus Say. It can be distinguished by the fine punctures of the head and pronotum.
Paratyndaris tucsoni n. sp.
o. Form robust, cylindrical, piceous with violaceous lustre, a small triangular red spot on lateral margin of each elytron, just in front of middle and another like area opposite it near suture, clothed above and below with recumbent white pulbescence.

Head convex, no sign of median depression, eyes small, finely granulate; surface finely punctured, densely pubescent; antennae short, not reaching middle of pronotum when laid along side margin, serrate from the seventh joint.

Pronotum slightly broader than long, widest in middle, wider at base than at apex; sides broadly rounded; lateral margin entire; anterior margin broadly rounded; basal margin slightly sinuate; disk convex, void of median depression; surface densely coarsely punctured at sides, transversely asperate in middle, pubescence concealing punctures at sides, pubescence of central area so short that it appears denuded. Scutellum round, glabrous.

Elytra wider than widest part of pronotum; sides constricted back of humeral angles, subparallel back of middle, then rounded to apices: apices with three teeth along margin and three above; lateral margins serrate from middle; disk convex, umbone prominent; surface irregularly striate, punctures of striae much larger than those of interspaces.

Abdomen beneath finely punctured, the vestiture concealing most of the sculpture, second segment at middle of posterior margin with a small rounded plate extending over the third segment, nearly one half of its width; plate granulate, last abdominal segment terminating in an acute spine. Tarsi slender, claws simple, not toothed, bit slightly swollen at bases.

Length 6 mmm . ; width 2.2 mm .
. . Differs from the male by the ventral abdominal plate being much smaller.

Described from one pair collected at Tucson, Arizona. August 13, 1936, by the author. Holotype and allotype in writer's collection.

According to the key ${ }^{2}$ this species comes next to $P$. anomalis Knull. It can be separated from this species by the arrangement of the red markings of the elytra, which are not united. Superficially it resembles $P$. acaciac Knull, but it can be separated by the serrate seventh antennal joint, lack of a median depression on pronotum and having two red dots on each elytron.

## Paratyndaris quadrinotata 11. sp.

of. Form robust, cylindrical, piceous above and below, an irregular red area along side margin of each elytron in front of middle, another like round area opposite this near suture, clothed above and below with recumbent white pubescence.

Head convex, no sign of median depression, eyes small, finely granulate; surface coarsely punctured, densely pubescent ; antennae short, not extending to middle of pronotum when laid along side margin, serrate from the sixth joint.

Pronotum wider than long, widest in front of middle, wider at base than at apex; sides constricted in front, then broadly rounded to base ; lateral margin entire ; anterior margin broadly ronnded; basal margin slightly sinuate; disk convex, void of median depression, surface densely coarsely asperate. Scutellum round, glabrous.

Elytra slightly narrower than pronotum; sides constricted back of humeral angles, subparallel to back of middle, broadly rounded to apices; apices with three teeth along margin and three above; lateral margins serrate from middle; disk convex, umbone prominent; surface irregularly strigate, punctures of striae much larger than those of interspaces.

Abdomen beneath finely punctured, vestiture concealing most of the sculpture, second segment at middle of posterior margin with a small rounded plate extending over the third segment one-third of its width, plate granulate, last abdominal segment terminating in an obtuse spine. Tarsi slender, claws simple, not toothed, but slightly swollen at bases.

Length: 5.9 mm . ; width 2.2 mm .
of differs from the male by the ventral abdominal plate being slightly swollen.

Described from a small series collected at Tucson, Arizona, from July 27 to August 15, 1936, by the writer. Type labeled August 15, allotype and paratypes in author's collection.

According to the key ${ }^{2}$ this species would come next to $P$. coursctiae Fishr. The extra spot on the elytron will serve to distinguish it.
${ }^{2}$ J. N. Knull, Ann. Ent. Soc. Am., Vol, 30, No. 2, pp. 252-257, 1937.


[^0]:    ${ }^{1}$ E. C. Van Dyke, Proc. Cal. Acad. Sci., Vol. 20, No. 9, pp. 291-465, 1932.

